

REMARKS

Applicants' attorney would like to thank the Examiner for the telephone interview during which the above changes were discussed.

The specification has been amended on page 16 to provide support for the term "computer-readable medium" now appearing in claim 27.

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, claims 6-8, 11, 15 and 23-26 have been cancelled, while claims 1 and 22 have been amended to include the limitations of cancelled claim 6. In addition, claim 27 has been made an independent claim and includes the limitations of claim 22. Furthermore, the claims have been amended for clarity.

The Examiner has objected to the specification under 37 C.F.R. 1.75(d)(1) and MPEP §608.01(o), and has rejected claim 27 under 35 U.S.C. 112, paragraph 1, as failing to comply with the written description requirement, in that the subject matter "computer-readable medium" is not defined or described in the specification.

Applicants note that claim 27 had been previously amended merely to comply with '101 requirements. Applicants point out that MPEP §2163.07(a) states:

"By disclosing in a patent application a device that inherently performs a function or has a property, operates according to a theory or has an advantage, a patent application necessarily discloses that function, theory or advantage, even though it says nothing

explicit concerning it. The application may later be amended to recite the function, theory or advantage without introducing prohibited new matter. *In re Reynolds*, 443 F.2d 384, 170 USPQ 94 (CCPA 1971); *In re Smythe*, 480 F. 2d 1376, 178 USPQ 279 (CCPA 1973)."

Applicants have amended the specification on page 16 to indicate that the computer software for implementing the invention and running on one or more processors, is stored on a computer-readable medium. Applicants submit that it is inherent that a processor would have a program product stored on some computer-readable medium (e.g., a computer (or processor) memory) in order for the processor to execute the steps in the program. As such, Applicants submit that it does not constitute new matter for the claim and now the specification to be amended to now state that the computer program product is stored on a computer-readable medium.

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, claim 21 has been amended for clarity, while claim 27 has been amended to correct an obvious typographical error.

Applicants believe that the above changes answer the Examiner's 35 U.S.C. 112, paragraph 2, rejection of claim 21, and respectfully request withdrawal thereof.

The Examiner has rejected claims 1-3, 6-20, 23-25, 27 and 28 under 35 U.S.C. 101 in that the claimed invention is directed to non-statutory subject matter.

Applicants submit that the Examiner is in error. While, as noted in the specification on page 16, the subject invention "can be implemented in any suitable form including hardware, software,

firmware or any combination of these", it is a well-established practice in preparing a patent specification to include several embodiments in the specification. To the extent that the specification covers the invention embodied in software, Applicants submit that this is statutorily claimed in, for example, claim 27 which claims a computer-readable medium containing the "software program". However, the rejected claims relate to a hardware implementation. In particular, claim 1 includes a "pre-encoder" shown in Fig. 1 as element 103, and described in the specification on page 10, line 15 to page 11, line 9; a "decoder" shown in Fig. 1 as element 111, and described in the specification on page 11, lines 10-13; a "watermark embedder" shown in Fig. 1 as element 113, and described in the specification on page 11, lines 13-21; and a "re-encoder" shown in Fig. 1 as element 117, and described in the specification on page 11, lines 22-25. To further indicate that the claims are statutory, claims 1 and 22 have been amended to clearly indicate that the various elements are "implemented in hardware". As such, Applicants submit that claims 1-3, 6-20 and 23-25 are indeed statutory.

The Examiner has rejected claims 1-9, 11, 16-22, 27 and 28 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Publication No. 2002/0002412A1 to Gunji et al. (reported by the Examiner as Hiroshi et al.). The Examiner has further rejected claims 6, 10, 12-15 and 23-26 under 35 U.S.C. 103(a) as being unpatentable over Gunji et al. in view of U.S. Patent Application Publication No. 2002/0034376 to Katayama et al.

Applicants would like to note that the Examiner has included claim 6 in the 35 U.S.C. 102(b) rejection, as well as in the Examiner's 35 U.S.C. 103(a) rejection.

The Gunji et al. patent discloses a digital audio system.

As noted in MPEP §2131, it is well-founded that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Claim 1 (as well as claims 22 and 27) includes the limitation "wherein the pre-encoder generates encoding assistance data for a different encoding data rate than an encoding data rate of the pre-encoded signal, said encoding assistance data including at least one of encoding quantization control data and encoding scale factor data".

Applicants submit that there is no disclosure or suggestion in Gunji et al. that the re-encoder encodes the watermarked signal at a different encoding rate than that of the pre-encoded signal, and that the pre-encoder generates the encoding

assistance data for this different encoding rate. This is described in the specification on page 10, line 32 to page 11, line 9.

Claim 9 includes the limitation "wherein the encoding scale factor data comprises a scale factor offset associated with a scale factor offset value between a first encoding rate and a second encoding rate." The Examiner has indicated that Gunji et al. discloses this limitation at paragraphs 49 and 50.

Applicants submit that the Examiner is mistaken. In particular, the noted paragraphs of Gunji et al. state:

"[0049] The audio data converted to the sub-bands of frequency domain is quantized in the numbers of bits allotted by adaptive bit allotment as shown by (E) in FIG. 3. In the quantizing process, the data size of sub-band is evaluated in terms of a scale factor, and each sub-band is expressed by a scale factor and a normalized waveform. Specifically, multiple sample data in a sub-band are separated into a waveform which is normalized to have a peak value of 1.0 and a magnification factor, i.e., scale factor.

[0050] Finally, a code is produced from these data as shown by (F) in FIG. 3. Coded data of each frame begins with a 4-byte header. The header has its leading 12 bits fixed to logic "1", and the MPEG audio decoder decodes a coded frame which begins with the 12 bits of "1". The header further includes information on the sampling frequency of PCM digital audio and the presence or absence of CRC, by which information the byte length of a coded frame can be calculated. The header of MPEG audio data of a coded frame is followed by the bit allotment information, scale factor and sub-band waveform samples."

It should be apparent that while Gunji et al. mentions the term "scale factor", there is no disclosure or suggestion that the "encoding scale factor data comprises a scale factor offset associated with a scale factor offset value between a first encoding rate and a second encoding rate."

The Katayama et al. publication discloses a coding device, coding method, program and recording medium. The Examiner has indicated that Katayama et al. discloses "that an encoder may include encoding assistance data comprising "scale factor offset data" for enabling a re-encoder to encode the signal at a second encoding rate (Katayama, par. 10-12)."

Applicants submit that the Examiner is mistaken. In particular, the noted paragraphs of Katayama et al. state:

"[0010] In one embodiment of the invention, the quantization of the frequency domain signal is performed to indicate frequency spectrums for respective frequency bands of the frequency domain signal by mantissa parts and exponent parts; each of the exponent parts is a scale factor of each of the frequency spectrums for the respective frequency bands; the re-encoder calculates the psychoacoustic model information based on dequantized frequency spectrums for the respective frequency bands generated by dequantizing the first audio stream information; and the re-encoder converts the first audio stream information into the second audio stream information having a bit rate lower than the first audio stream information by reallocating, based on the psychoacoustic model information, the number of bits allocated to the mantissa parts.

[0011] In one embodiment of the invention, when performing downmix processing so as to reduce the number of channels of the second audio stream to less than the number of channels of the first audio stream, the re-encoder calculates the psychoacoustic model information based on dequantized frequency spectrums for the respective frequency bands on which downmix processing has been performed.

[0012] In one embodiment of the invention, the coding device further includes: a receiving section for receiving the first stream signal, a control section for indicating to the re-encoder section bit rates of the second video stream information and the second audio stream information, and a recording section for recording the second stream signal on a recording medium."

Applicants submit that it should be apparent that Katayama et al. merely mentions scale factor with regard to frequency bands in the frequency domain signal. However, there is no disclosure of "a scale factor offset associated with a scale factor offset value between a first encoding rate and a second encoding rate."

Applicants would like to note that Katayama et al. does mention re-encoding at a different encoding rate than that of the received encoded signal. However, Katayama et al. further states that, in one embodiment, the re-encoder calculates the psychoacoustic model information. Paragraph [0012] does indicate that a control section indicates to the re-encoder section the bit rates of the second video/audio stream information. However, as explained in paragraphs [0048] and [0083], the control signal 123 originates from the control circuit 105 which receives its instructions from remote control 108, i.e., from the user.

Further, Applicants submit that Katayama et al. does not supply that which is missing from Gunji et al., i.e., "the pre-encoder generates encoding assistance data for a different encoding data rate than an encoding data rate of the pre-encoded signal, said encoding assistance data including at least one of encoding quantization control data and encoding scale factor data".

In view of the above, Applicants believe that the subject invention, as claimed, is neither anticipated nor rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.

Applicants believe that this application, containing claims 1-5, 9, 10, 12-14, 16-22 and 27, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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